

REHABILITATION REPORT

**THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON
THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF
FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF
FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS,
WESTERN CAPE.**



Prepared By

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1. INTRODUCTION AND OVERVIEW OF PROJECT

Guillaume Nel Environmental Consultants (GNEC) have been appointed by PropInvest (Pty) Ltd. (applicant) to facilitate the Rehabilitation Report and Environmental Impact Assessment (EIA) process in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and a Water Use License in terms of the National Water Act, 1998 (Act No. 36 of 1998), for the proposed Mount View residential development on Portion 2 of Farm Goede Verwachting No. 870, Remainder of Farm No. 869, Farm No. 1262, Remainder of Farm No. 866, Remainder of Farm No. 1054, Portion 2 of Farm No. 1054 and Portion 3 of Farm No. 1054, Sir Lowry's Pass, Western Cape (hereafter referred to as the proposed development site/subject property).

2. SITE LOCATION AND STUDY AREA

The study area falls within the City of Cape Town at the south-eastern edge of the municipal boundary. The surrounding suburbs are Gorgons Bay, Somerset West and Strand. The closest major roads are the N2 (Sir Lowry's Pass) and Old Sir Lowry's Pass Road, which bisects the Study area. Two portions of the site have been excluded from the development footprint and will be retained by the current property owners. A small drainage line flows through the Study area. The layout of the proposed development is presented in Figure 5.

The rehabilitation report will focus on two areas to be rehabilitated:

- The non – perennial watercourse extending through the development.
- The previously disturbed and degraded wetland area.

Please refer to Figure 1 below for the locality map of the proposed development.

Please refer to Figure 2 below for the locality map of the non-perennial watercourse to be rehabilitated.

Please refer to Figure 3 below for the previously disturbed and degraded wetland area to be rehabilitated

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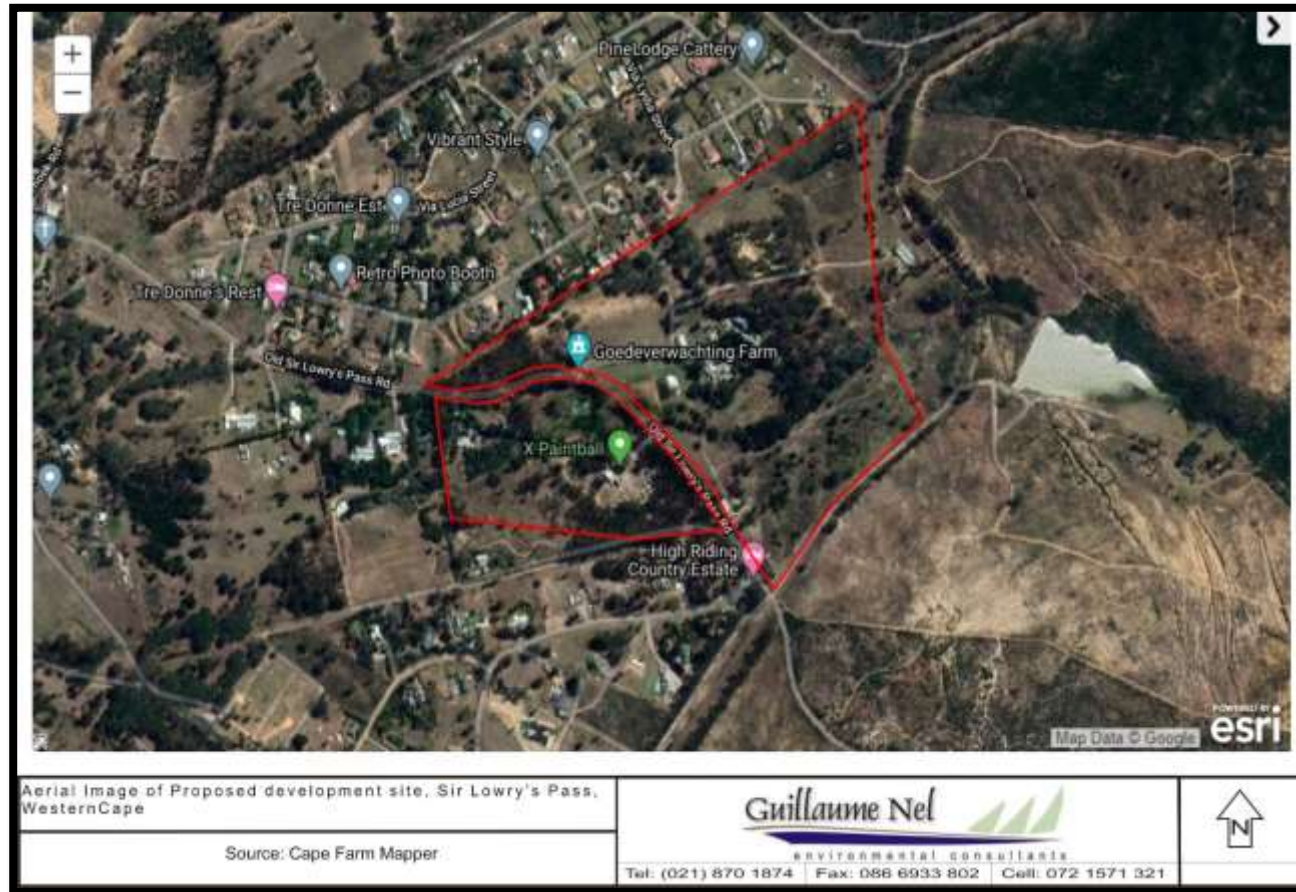


FIGURE 1: LOCALITY MAP OF THE PROPOSED DEVELOPMENT.

THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS, WESTERN CAPE, REHABILITATION PLAN.



FIGURE 2: LOCALITY MAP LOCALITY OF THE NON-PERENNIAL WATERCOURSE TO BE REHABILITATED.

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869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF
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REHABILITATION PLAN.**

3. THE VEGETATION

3.1 Vegetation within study area.

According to the Vegetation Map of South Africa, Lesotho and Swaziland (SANBI, 2018) (VEGMAP), the two vegetation types occurring in the study area are Boland Granite Fynbos and to a lesser degree Lourensford Alluvium Fynbos (Figure 6). Lourensford Alluvium Fynbos was not found to occur within the study area.

Please refer to Figure 4 below: Vegetation map of the study area:

Please refer to Figure 5 below: Habitat Map:

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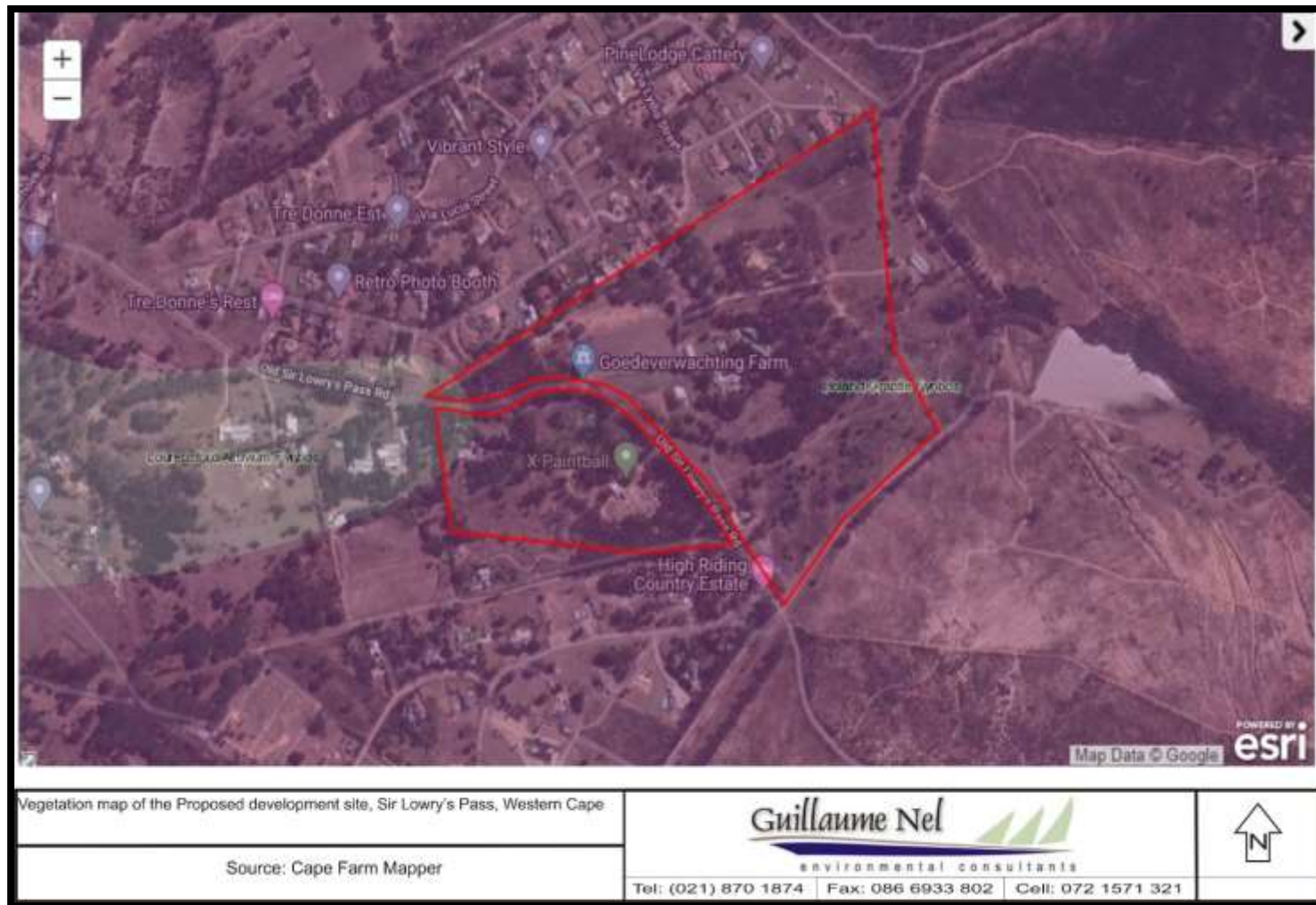


FIGURE 4: VEGETATION MAP OF THE STUDY AREA.

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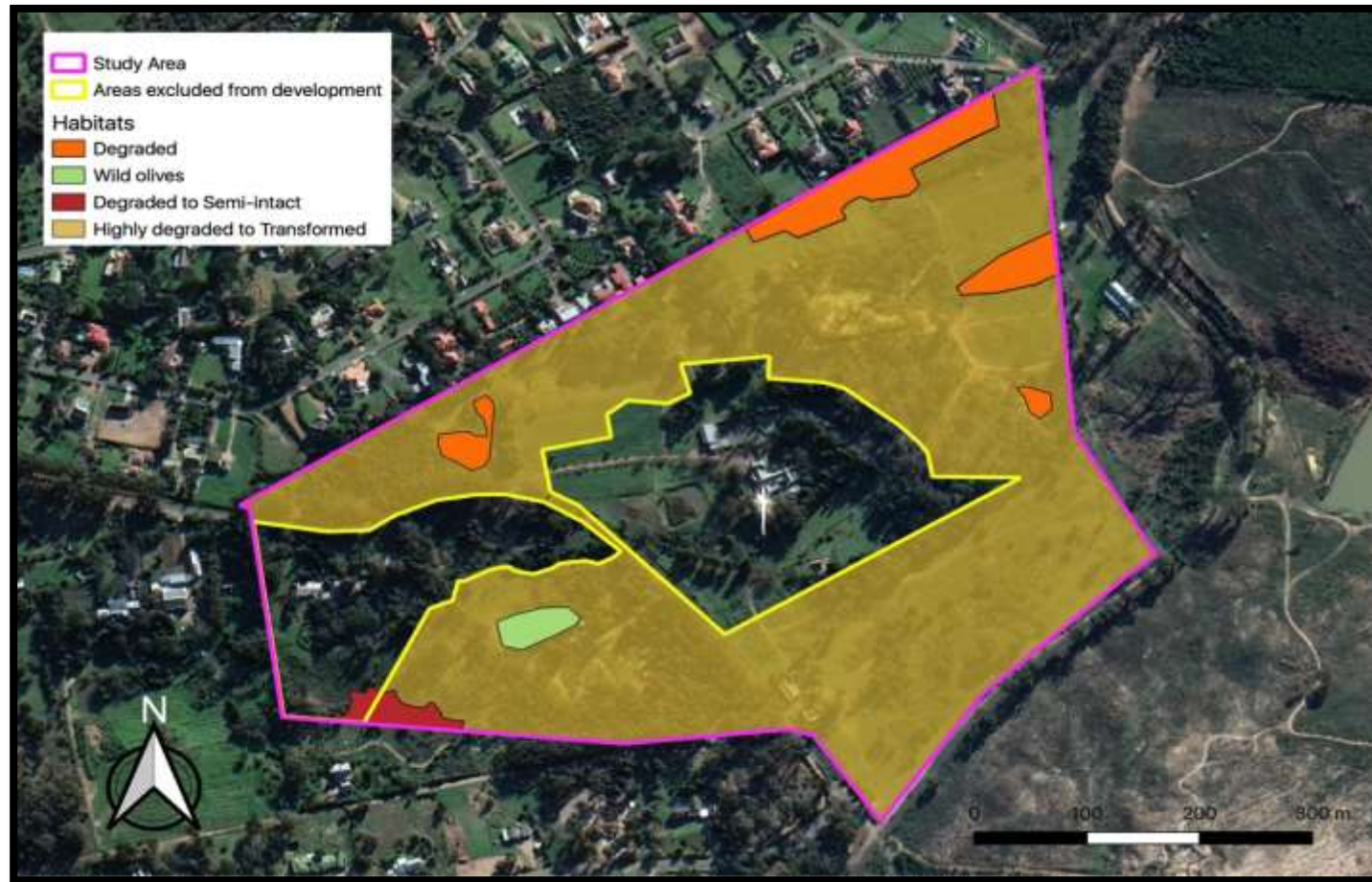


FIGURE 5: HABITAT MAP: GOOGLE EARTHTM AERIAL IMAGE SHOWING THE HABITATS MAPPED WITHIN THE STUDY AREA.

THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS, WESTERN CAPE, REHABILITATION PLAN.

3.2 Ecological status of the freshwater system.

The non-perennial watercourse and related wetland to be rehabilitated has been highly degraded and transformed.

These areas consist mostly of invasive vegetation.

Invasive species identified within these areas:

Pennisetum clandestinum

Echium plantagineum

Plantago lanceolate

Lysimachia monelli

Myoporum tenuifolium

Raphanus raphanistrum

Ricinus communis

Cirsium vulgare

Populus sp.

Eucalyptus sp.

Pinus

Acacia mearnsii

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Watercourse	PES	Ecoservices	EIS	REC and RMO
Unnamed tributary of Sir Lowry's Pass River	Category D (Largely modified)	Intermediate	High	Category C/D Improve
Extent of modification	Minor Minor modification is anticipated to the extent of the unnamed tributary, specifically due to installation of new and upgrading of existing culvert structures which will necessitate work within the active channel of the unnamed tributary. Some of the stormwater outlet structures from the proposed mixed-use development will also be located within the riparian zone of the unnamed tributary. Thus, stormwater released from the discharge points adjacent to the unnamed tributary must disperse before entering the watercourse to prevent incision and erosion. No new infrastructure is proposed within the unnamed tributary that may fragment or degrade the system. The culvert within the tributary that is to be upgraded will improve the hydrological connectivity between the upstream and downstream reach of the tributary.			
CVB wetland 1	C (Moderately Modified)	Intermediate	Intermediate	REC: B/C RMO: Improve
CVB wetlands 2 to 5	Category D (Largely modified)	Intermediate	Intermediate	Category C/D Improve
Extent of modification	High Significant modifications are anticipated to the reach of the CVB wetland (3) associated with the removal of unauthorised infilled material as part of the proposed Mount View mixed-use development which may result in the partial loss of wetland habitat. Similarly, habitat fragmentation is likely within this reach of the CVB wetland. Thus, it is recommended that the wetland habitat loss due to these activities be ideally reinstated within the fill area following removal of the infilled material to ensure no net to the CVB wetland. The long-term impacts for the removal of the infilled material can be considered low as rehabilitation of this site will ensure ecological connectivity and increase the area of wetland habitat. Stormwater released from the surrounding outlet structures into the wetlands must disperse before entering the wetland to prevent incision and erosion.			

TABLE 1: ECOLOGICAL STATUS OF THE FRESHWATER SYSTEM.



FIGURE 6: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 7: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 8: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 9: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 10: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 11: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 12: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 13: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 14: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 15: ALIEN INFESTED NON PERENNIAL WATERCOURSE.



FIGURE 16: ALIEN INFESTED WETLAND AREA.



FIGURE 17: ALIEN INFESTED WETLAND AREA.



FIGURE 18: ALIEN INFESTED WETLAND AREA.



FIGURE 19: ALIEN INFESTED WETLAND AREA.



FIGURE 20: ALIEN INFESTED WETLAND AREA.



FIGURE 21: ALIEN INFESTED WETLAND AREA.

4. REHABILITATION MEASURES

4.1 Alien Clearing Management Plan

Prior to commencement for rehabilitation the entire study area must be cleared of invasive vegetation.

An alien clearing management plan must be implemented for at least three years after rehabilitation to manage the aliens that might germinate in the rehabilitated areas. Follow-up alien clearing practices must be conducted every 6 months for three years after rehabilitation.

Alien clearing practices that must be applied:

4.1.1 Cutting and painting of medium size individuals

Invasive alien plants must be cut and painted with herbicide where they are too difficult to pull out by hand. Invasive trees must be cut so as to leave a stem of 10cm. The remaining stems must be painted with a systemic herbicide. The systemic herbicide must be coloured to ensure that all the cut stems are treated. Care should be taken not to spill systemic poison when painting the stems. The systemic poison is intended to infiltrate the cut stems thus killing the roots and preventing the invasive tree from re-sprouting again. Cut material must be removed from the site to the nearest licensed landfill to prevent the spread of seeds.

Systemic Poison, Enviro - Glyphosate; 2% Application. (Registered for use near waterbodies)



FIGURE 23: A CUT STEM TREATED WITH A COLOURED SYSTEMIC HERBICIDE.

4.1.2 Hand pulling of smaller invasive species

Since the area is in close proximity to a watercourse, no spot spraying of invasive species must be allowed since the herbicidal drift might negatively impact upon the unnamed tributary of the Sir Lowry's Pass River. Smaller plants of invasive species must be hand-pulled. This is the most effective and environmentally- friendly way to eradicate smaller plants of invasive species.



FIGURE 24: AN EXAMPLE OF SMALL PLANTS OF INVASIVE SPECIES IDEAL FOR HAND PULLING.

4.1.3 Ring barking of larger species

Ring barking is a technique that involves removing a ring of bark around a tree trunk. Ring barking interferes with the circulation of the tree and results in it slowly dying. Remove a 30 to 40 cm strip of bark around the base of the tree trunk to ground level. Ring-barking removes the cambium/phloem, a layer just beneath the bark, which carries food from the leaves down to the roots. The roots will eventually die thereby killing the tree. The ring barked area can then be painted with a systemic poison.



FIGURE 25: EXAMPLE OF RING BARKING LARGER INVASIVE TREES.

4.1.4 Storage and Removal of invasive vegetation

- An area (only one) must be identified for temporary stockpiling of the cleared invasive vegetation; the aim would be to prevent the spread of seeds of alien invasive species and contamination of adjacent natural areas.
- The area identified should not be in close proximity of a watercourse/wetland to prevent seeds from entering and spreading along the watercourse;
- Any invasive vegetation left on site would be a fire hazard, would deposit seed and would inhibit the growth of fynbos;
- All invasive vegetation must be removed immediately from the area where cleared to the identified stockpile area;
- Alien vegetation must be transported in a closed truck to prevent the seeds from spreading along the road. Alternatively the alien vegetation can be covered with a tarpaulin during transport;
- The invasive vegetation at the stockpile area needs to be regularly removed disposed at the designated licensed landfill site.

4.1.5 Burning

Burning of cleared invasive vegetation on site is strictly prohibited. Cleared invasive vegetation must be taken to the nearest licensed disposal facility. Should burning of invasive vegetation on example a farmers land be considered, the necessary permits need to be applied for and in place. Burning without the necessary permits are a criminal offence and a fire hazard.

4.1.6 Wetland/Watercourse/ management measures during alien clearing practices

- The contractor needs to make sure that excessive quantities of sand and silt do not enter the wetland/watercourse/drainage line habitat;
- The contractor needs to take cognisance of weather forecast. No clearing activities must be allowed during times of high rainfall;
- Alien clearing to be conducted within wetland/watercourse habitat, must be done by manual labour; no heavy machinery allowed;
- All potential pollutants should be kept away from the wetland/watercourse habitat including:
 - Oil, diesel or petrol used for machinery during alien clearing activities;
 - Any chemicals for the control of alien vegetation; and
 - Sanitation structures.
- No spoil material should be placed in close proximity to the wetland/watercourse habitat, dumped on riparian or bank habitats, spread out around trees, used to fill hollows and other irregularities in the wetland/watercourse, or be used for erosion control, but must be removed to the approved dumping site; and
- No spraying of herbicide allowed in close proximity to any water bodies.

4.1.7 Protective gear

Working in a dangerous environment, operators need to have the necessary protective gear:

- Safety boots, steel cap;
- Safety gloves;
- Face mask to prevent herbicide inhalation;
- Safety glasses for eye protection;
- Reflector vests to ensure visibility; and
- PPE for chainsaw operators.

4.1.8 Frequency of Alien Clearing

Prior to commencement for rehabilitation the entire study area must be cleared of invasive vegetation.

An alien clearing management plan must be implemented for at least three years after rehabilitation to manage the aliens that might germinate in the rehabilitated areas. Follow-up alien clearing practices must be conducted every 6 months for three years after rehabilitation.

Reasons for follow up:

- Due to the disturbance of soil during the initial clearing activities, invasive seeds within the seedbank of the soil will start to germinate. These germinated species need to be removed before they produce seed to prevent ongoing infestation.
- Cut down and treated trees also tend to re-sprout. A 2nd application of herbicide will be necessary for these species.

4.2 Management of topsoil

Topsoil is crucial as it act as an important growing medium for the species to be planted. Due to the fact that this area has been previously disturbed and degraded as mentioned, there is not much of an indigenous seedbank within the topsoil to contribute to natural rehabilitation. Topsoil will focus more to ensure the correct growing medium of endemic species to be planted.

Topsoil for the watercourse to be rehabilitated:

- Topsoil in this section will not be windrowed or moved as this will lead to more disturbance of this area;
- Light shaping to be done at eroded embankments of the watercourse;
- Eroded embankments need to be shaped in such a way that it blends in with the natural contour and drainage line of the site and watercourse profile;
- The natural topsoil of the area will remain and will be used as the growing medium for rehabilitation purposes;
- Due to the fact that this area has been previously disturbed all invasive species within this section needs to be removed prior to rehabilitation as per Alien Clearing Management Plan as describe above.

Topsoil for the previously disturbed and degraded wetland:

- The wetland area has been filled, interfering with the natural contour and drainage line of the non-perennial watercourse and related wetland. The excess soil need

to be removed to ensure that this wetland section blends in with the natural contour and drainage lines of the non-perennial watercourse and related wetland;

- 200mm of topsoil needs to be removed and safely stockpiled as a growing medium for rehabilitation purposes;
- It was mentioned that the subsoil will be used during the construction as other areas need to be filled;
- Topsoil need to be monitored for potential invasive species germination.

4.3 Preparation of soil prior to rehabilitation

Soil preparation is crucial for effective rehabilitation.

Subsoil and topsoil cannot be mixed and need to be kept separately.

All compacted areas need to be loosened (slightly ripped) to the depth of 20cm prior to rehabilitation. The protected topsoil then need to be spread over the area in such a way that it blends in with the natural contour and drainage line of the site.

Ripping and shaping will ensure:

- That all compacted areas be loosened and aerated;
- Will ensure better infiltration of precipitation and less erosion;
- Will make planting during rehabilitation easier;
- Will stimulate natural rehabilitation by means of seed germination; and
- Will positively contribute to the visual and aesthetic value of the site.

4.4 Timing of rehabilitation.

As per Freshwater Specialist Report:

Rehabilitation of the unnamed tributary of the Sir Lowry's Pass River and associated CVB wetlands should commence as soon as possible and should optimally be concurrent as work progress. Rehabilitation should have a fixed deadline for completion.

Planting:

Owing to the fact that there will be no irrigation to help the plants to settle and strengthen, the best time for planting would be at the beginning of the rainy season (May). This will help the plants to settle and establish before the following dry summer. All plants (even water-wise plants) need water in the establishment phase. Should planting be done during the summer months (not advised) the planted areas need to be watered at least once a week.

4.5 Rehabilitation of the disturbed and degraded non-perennial watercourse:

The non-perennial watercourse has been highly degraded and transformed.
The watercourse consist mostly of invasive vegetation.

Plants for rehabilitation have been carefully selected using the following criteria:

- An on-site survey has been conducted to identify the locally indigenous vegetation naturally occurring on site and surrounding areas;
- The description of Boland Granite Fynbos and Lourensford Alluvium Fynbos has been consulted and species carefully selected for rehabilitation which naturally occur in areas under discussion; and
- The Botanical and Freshwater Impact Assessment report compiled by the specialists have been consulted.

Please refer to Figure 26 below; Watercourse Rehabilitation Plan.

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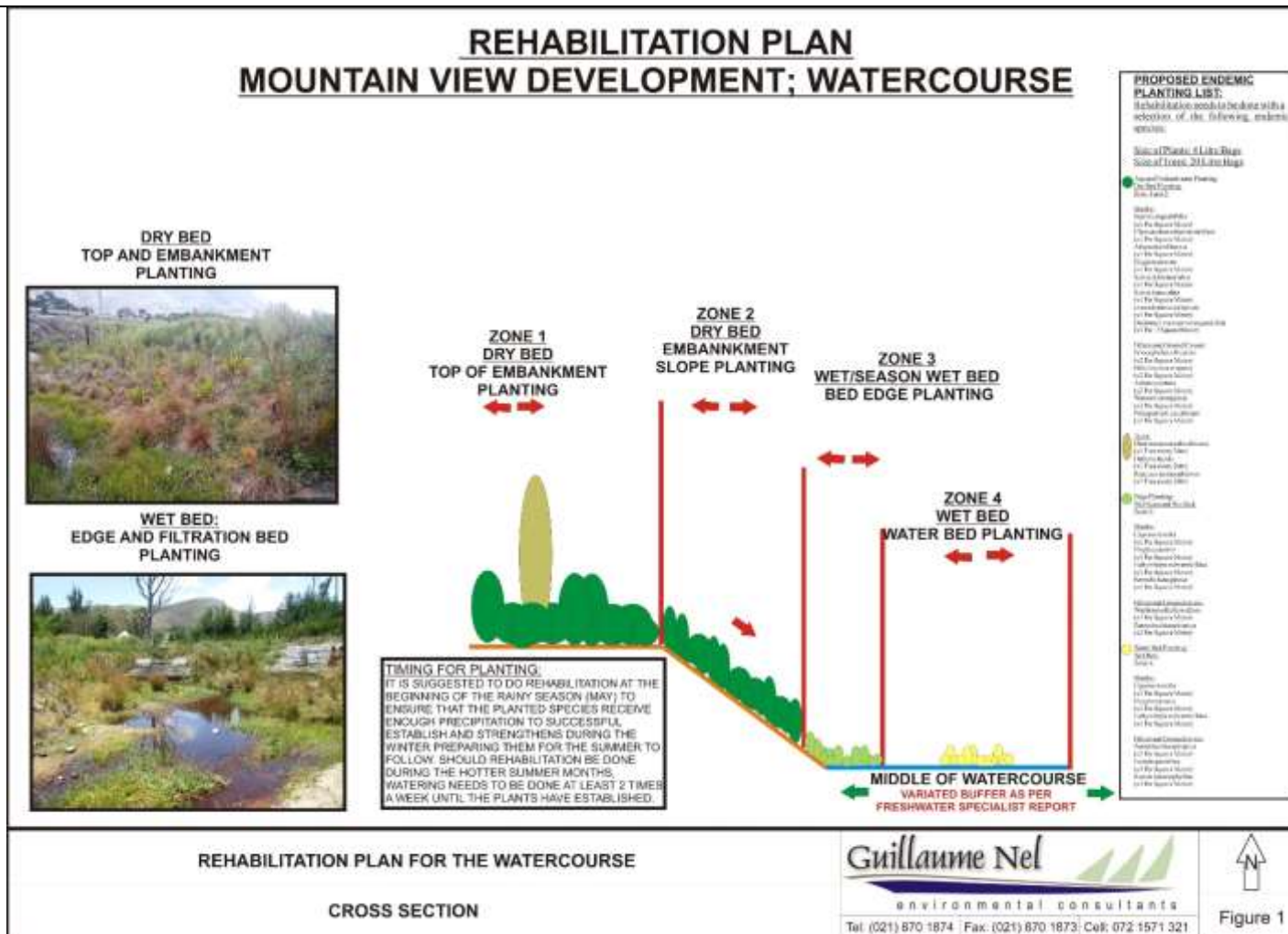


FIGURE 26: WATERCOURSE REHABILITATION PLAN.

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Rehabilitation needs to be done with a selection of the following endemic species:

Size of Plants: 4 Litre Bags

Size of Trees: 20 Litre Bags

Top and Embankment Planting:

Dry Bed Planting:

Zone 1 and 2:

Shrubs:

Searsia angustifolia

(x1 Per Square Meter)



Chrysanthemoides monilifera

(x1 Per Square Meter)



Athanasia trifurcata

(x1 Per Square Meter)



Elegia tectorum

(x1 Per Square Meter)



Salvia Africana lutea

(x1 Per Square Meter)



Salvia lanceolata

(x1 Per Square Meter)



Leucadendron salignum

(x1 Per Square Meter)



Dodonaea viscosa var *angustifolia*

(x1 Per 3 Square Meters)



Fillers and Ground Covers:

Eriocephalus africanus
(x2 Per Square Meter)



Helichrysum crispum
(x2 Per Square Meter)



Aristea capitata
(x2 Per Square Meter)



Watsonia marginata
(x2 Per Square Meter)



Pelargonium cucullatum
(x2 Per Square Meter)



Trees:

Olea europaea subs africana
(x1 Tree every 20m)



Halleria lucida
(x1 Tree every 20m)



Rapanea melanophloeos
(x1 Tree every 20m)



Edge Planting:

Wet/Seasonal Wet Bed:

Zone 3:

Shrubs:

Cyperus textilis

(x1 Per Square Meter)



Elegia capensis

(x1 Per Square Meter)



Ischyrolepis subverticillata

(x1 Per Square Meter)



Berzelia lanuginosa

(x1 Per Square Meter)



Fillers and Groundcovers:

Wachendorfia thyrsiflora

(x2 Per Square Meter)



Zantedeschia aethiopica

(x2 Per Square Meter)



Water Bed Planting:

Wet Bed:

Zone 4:

Shrubs:

Cyperus textilis

(x1 Per Square Meter)



Elegia capensis

(x1 Per Square Meter)



Ischyrolepis subverticillata

(x1 Per Square Meter)



Fillers and Groundcovers:

Zantedeschia aetiopica

(x2 Per Square Meter)



Isolepis prolifera

(x3 Per Square Meter)



Juncus lomatophyllus

(x3 Per Square Meter)



4.6 Rehabilitation of the disturbed and degraded wetland area:

The wetland area has been filled, interfering with the natural contour and drainage line of the non-perennial watercourse and related wetland. The excess soil need to be removed to ensure that this wetland section blends in with the natural contour and drainage lines of the non-perennial watercourse and related wetland;

200mm of topsoil needs to be removed and safely stockpiled as a growing medium for rehabilitation purposes;

It was mentioned that the subsoil will be used during the construction as other areas need to be filled.

Plants for rehabilitation have been carefully selected using the following criteria:

- An on-site survey has been conducted to identify the locally indigenous vegetation naturally occurring on site and surrounding areas;
- The description of Boland Granite Fynbos and Lourensford Alluvium Fynbos has been consulted and species carefully selected for rehabilitation which naturally occur in areas under discussion; and
- The Botanical and Freshwater Impact assessment report compiled by the specialists have been consulted.

Please refer to Figure 25 below; Wetland Rehabilitation Plan.

[illegible]

Prepared by Guillaume Nel Environmental Consultants

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Rehabilitation needs to be done with a selection of the following endemic species:

Size of Plants: 4 Litre Bags

Size of Trees: 10 Litre Bags

Top and Embankment Planting:

Dry Bed Planting:

Zone 1 and 2:

Shrubs:

Searsia angustifolia

(x1 Per Square Meter)



Chrysanthemoides monilifera

(x1 Per Square Meter)



Athanasia trifurcata

(x1 Per Square Meter)



Elegia tectorum

(x1 Per Square Meter)



Salvia Africana lutea

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Salvia lanceolata

(x1 Per Square Meter)



Leucadendron salignum

(x1 Per Square Meter)



Dodonaea viscosa var *angustifolia*

(x1 Per 3 Square Meter)



Fillers and Ground Covers:

Eriocephalus africanus
(x2 Per Square Meter)



Helichrysum crispum
(x2 Per Square Meter)



Aristea capitata
(x2 Per Square Meter)



Watsonia marginata
(x2 Per Square Meter)



Pelargonium cucullatum
(x2 Per Square Meter)



Trees:

Olea europaea subs africana
(x1 Tree every 20m)



Halleria lucida
(x1 Tree every 20m)



Rapanea melanophloeos
(x1 Tree every 20m)



Edge Planting:

Wet/Seasonal Wet Bed:

Zone 3:

Shrubs:

Cyperus textilis

(x1 Per Square Meter)



Elegia capensis

(x1 Per Square Meter)



Ischyrolepis subverticillata

(x1 Per Square Meter)



Berzelia lanuginosa

(x1 Per Square Meter)



Fillers and Groundcovers:

Wachendorfia thyrsiflora

(x2 Per Square Meter)



Zantedeschia aetiopica

(x2 Per Square Meter)



4.7 Future Maintenance Steps for the rehabilitated areas:

- An alien clearing management plan must be implemented for at least three years after rehabilitation to manage the aliens that might germinate in the rehabilitated areas. Follow-up alien clearing practices must be conducted every 6 months for three years after rehabilitation.
- Regular Visual inspections to monitor erosion or any gully formation. It is suggested that visual inspection to be conducted every 3 months for 2 years.
- Should any erosion or gullies be identified during site inspections, a qualified Horticulturist or Rehabilitation Specialist need to be consulted for rectifying measures.

4.8 Cordoning off rehabilitated area

After rehabilitation, the areas need to be clearly cordoned off to ensure that no damage is done to the rehabilitated area. Trampling of the areas will:

- Inhibit the successful growth of the plants.
- Lead to compaction of soil, poor water infiltration and erosion.

5. REHABILITATION OBJECTIVES

GNEC, in our professional capacity, as rehabilitation specialists feel that the above mentioned rehabilitation will:

- Ensure additional filtration of the water within the watercourse;
- Slow down the flow of the storm water and minimise erosion and loss of topsoil;
- Prevent erosion, gully formation and siltation;
- Positively contribute to the ecological and biodiversity value of the existing degraded watercourse and related wetland;
- Enhance the visual and aesthetic appearance of the existing degraded watercourse and related wetland;
- Will re-introduce endemic species to the disturbed areas;
- Will help to reduce/minimise any further loss of topsoil; and
- Will help to reduce/minimise any further loss of endemic vegetation.

Rehabilitation practices must be done by a qualified Botanist/Horticulturist/Rehabilitation specialist.

Rehabilitation objectives as per freshwater impact assessment report:

Activities	Impacts	Risk Significance	Rehabilitation Objectives
• Site access, clearing and preparation for civil works including initial service installation (water, sewer and telecommunication).	Preparation for civil works will necessitate the vegetation including the removal of all alien trees including their roots within the construction footprint, and the removal of all existing piles of disposed and spread material around the site, requiring the movement of construction vehicles in the vicinity of the watercourses. These disturbances will likely result in increased dust generation, leading to potential smothering of watercourse vegetation and impacts to water quality, as well as increased proliferation of alien invasive species.	Low Negative	• Manage vegetation removal and ensure it is disposed of correctly. • Mitigate and manage soil erosion and sedimentation within the watercourses as a result of the construction activities. • Alien invasive plant species control during construction and operation.

THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS, WESTERN CAPE, REHABILITATION PLAN.

Activities	Impacts	Risk Significance	Rehabilitation Objectives
Construction activities outside the delineated extent of the watercourses but within the variable conservation buffer: • Establishment of walkways; • The fence of three erven will be located within the variable conservation buffer; • The addition of a flood management berm on the downgradient side of the culvert below Old Sir Lowry's Pass Road as part of the floodline alteration activities will encroach into the edge of the conservation buffer and; • Landscaping within the variable buffer.	• Disturbances of soil leading to increased alien vegetation proliferation, and in turn to altered freshwater habitat; • Altered runoff patterns, leading to increased erosion and sedimentation of the watercourses; and • Increased sediment loads entering the watercourses.	Low Negative	• Mitigate and manage soil erosion and sedimentation within the watercourses. • Alien invasive plant species control during construction and operation. • Revegetation of the conservation buffer with suitable fynbos vegetation.

THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS, WESTERN CAPE, REHABILITATION PLAN.

Construction activities within the delineated extent of the watercourses: • Removal of unauthorised infilled material (cut-to-spoil) associated with CVB wetland 3; • Installation of the rectangular portal culvert with 330mm brick wing walls under the section of the internal roadway which traverses the upstream reach of the unnamed tributary; • Upgrading/extension of the existing culvert below Old Sir Lowry's Pass Road as part of the floodline alteration activities; • The addition of an open stormwater channel upgradient of Old Sir Lowry's Pass Road as part of the floodline alteration activities will encroach into the delineated	• Temporary impact on the hydrological functioning of the tributary due to activities within the active channel; • Alteration to the flow patterns and timing in the active channel; • Potential changes to the water retention pattern of the watercourses; • Removal of any remaining vegetation which may still provide habitat and deliver ecoservices; • Potential sedimentation of the watercourses; • Increased likelihood of dust generation due to exposed soil; • Constriction of flow associated with works on the proposed culverts leading to turbulent erosive flow of increased velocity and possible loss of recharge to downstream areas, impacting on downstream biota; • Decrease of surface water quality due to the use of concrete within the active channel of the tributary; and • Potential indiscriminate movement of construction equipment leading to compaction of soil which may result in the formation of gullies, resulting in erosion and incision;	Medium Negative	• Soil profiling and creation of a low-lying area for water to pond and allow for the reinstatement of wetland habitat following removal of the infilled area. • Ensure suitable hydrological connectivity prior to commencement of rehabilitation. • Mitigate and manage soil erosion and sedimentation within the watercourses. • Ensure all stormwater services are suitably designed. • Ensure sustainable drainage solutions are utilised as part of the Mount View mixed-use development.
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THE PROPOSED MOUNT VIEW RESIDENTIAL DEVELOPMENT ON THE REMAINDER OF FARM 869, FARM 1262, REMAINDER OF FARM 866, REMAINDER OF FARM 1054, PORTIONS 2 AND 3 OF FARM 1054 AND PORTION 2 OF FARM 870, SIR LOWRY'S PASS, WESTERN CAPE, REHABILITATION PLAN.

Activities	Impacts	Risk Significance	Rehabilitation Objectives
edge of CVB wetland 5; • Rehabilitation of culvert after installation; and • Establishment of stormwater outlet structures (e.g. stormwater outlets associated with CVB wetland 1 and 4).			
Rehabilitation of the watercourses and associated conservation buffer	• Soil compaction within the watercourses; • Possibility that the flow regime and increased sediment loads may be altered during the rehabilitation and revegetation of the unnamed tributary and CVB wetlands. This may result in a loss of recharge to the downstream reaches if water ponding occurs.	Medium Positive	• Ensure indigenous vegetation is reinstated. • Alien invasive species control during construction and operation. • Implement all mitigations as stipulated in Action 3 of this report.

TABLE 2: REHABILITATION OBJECTIVES.